



TAVERN CAPACITY GUIDELINE USING THE CURRENT BUILDING CODE DEPARTMENT OF NEIGHBORHOOD SERVICES

Taverns in operation prior to July 1, 2002 may be reviewed under the current Wisconsin Enrolled Commercial Building Code. The current code may allow for a higher capacity for taverns. This is because the current code allows for more people per square foot of assembly area, allows for more people to exit through a standard exit door and is more generous when evaluating capacity based on the number of water closets provided for each sex. But to qualify for this review, the building where the tavern is located will need to meet other requirements listed in this code. Please note that this is an overview of the code and does not include all code requirements that may apply due to unique circumstances.

When reviewing a building for tavern/night club occupancy, the owner/operator will need to verify that the space/building is in compliance with the code issues that are listed below. Because this review may become very technical, it is suggested that an owner/operator obtain the services of a design professional (architect or engineer) who will be knowledgeable in these code requirements.

Floor Plan Required

In order to evaluate an existing tavern, a scaled floor plan of the entire tavern occupancy must be provided to the inspector. This plan must include the tavern space, restrooms with fixture layout, corridors, stairways with widths noted, storage rooms, office space, kitchen areas, bar plus bar area, direction of all exit door swings, clear exit door widths, all furniture layout including tables, chairs, benches, stools, and identify areas with boundaries for standing or dancing only.

Type of construction:

What material is the building made up of? How many stories is it? How big (square feet) is it? The exterior wall construction that holds up the flooring systems will be reviewed. There are more restrictions if it's made of wood compared to masonry or concrete. Also, the floor, wall and roof systems throughout the building will be reviewed. Again, there may be more restrictions if these systems are made of combustible (wood) framing compared to non-combustible framing.

Required Fire Separations:

Within the building code, a tavern occupancy falls under an occupancy type called a "place of assembly" or "assembly group". When this type of use is not the only occupancy in the building, there will be a fire separation required between the tavern and the other occupancy types within that building. For example, if there is a residence or office use next to or above the tavern, there will be a required fire separation of 2 hours between the tavern and the other use when reviewed under the current building code. This means that the floor or wall system has to be constructed in accordance with a recognized national design standard such as Underwriters Laboratory (UL) who has verified that it would take two hours for a fire to burn through this floor or wall system.

Additional protection

A sprinkler system installed throughout the area will be an additional requirement if one of the following conditions exists:

- If the tavern is large and exceeds 5,000 square feet in total area.
- If the tavern has an occupant load of 300 or more people
- If the tavern area is located on a floor other than the level of exit discharge. This means that a patron would enter the tavern on a floor level (2nd floor) that is not the same floor level that a person enters into the building (1st floor).

Mechanical Ventilation:

The current building code requires that the space used as the tavern must provide mechanical ventilation that gives a minimum of two air changes per hour. This means that the space must have a mechanical ventilation system that can move enough air through the space to allow for 2 air changes an hour. A certain percent of the air that is moved through the space must be outdoor (fresh) air. This amount is usually based on the number of occupants. Typically an HVAC designer or contractor would need to verify this condition.

Restrooms

The number of water closets provided for each sex can be a determining factor for capacity. Separate facilities are required to be provided for each sex and the number of fixtures shall be distributed equally between the sexes. The minimum number of occupants per fixture is based upon the following:

Water Closets Male	1 required for each 40 male patrons or part thereof *
Water Closets Female	1 required for each 40 female patrons or part thereof
Lavatories	1 per 75 for each sex with a minimum of one in each restroom

*Where more than 1 water closet is required for males, urinals may be substituted for up to 50% of the required water closets.

Exits

- At least two exits shall be provided and distributed far apart (typically at opposite ends of the tavern space) so that in case of a fire, if one is blocked, the other exit may still be available. Taverns exceeding a capacity of 500 are required to provide three exits.
- Each exit door needs to be a minimum of 36 inches in width in order to provide a clear opening of 32 inches. The maximum width of an exit door is 48 inches. Exit doors need to have a level landing at each side of the door. Each landing shall be as wide as the door it serves and at least 44 inches deep.
- The exit doors need to swing in the direction of egress meaning they need to swing out of the tavern space. If one of the exit doors swings inward, the capacity of the tavern will be limited to 49 people.
- Exit doors that serve more than 100 persons are required to have panic hardware installed.
- Taverns that have a capacity of 50 persons or more shall provide illumination of the minimum of one foot-candle at the floor level for all exit doors, exit corridors and aisles, and exit stairways. In the event where the power supply fails, an emergency system must be provided to automatically illuminate the exit corridors, aisles and interior exit doors, exit stairways and on the interior and exterior of any exit doorway that leads directly to the outdoors. This power system shall be energized by batteries or an on-site generator.
- Stairways and corridors need to be a minimum of 44 inches in width. If stairways or corridors are less than 44 inches in width but meet the minimum of 36 inches, then they can only serve a maximum of 50 people. Winders on stairways are not permitted as part of the stair configuration.
- Exit doors widths can be a determining factor for capacity. If a tavern has two exit doors (as required), the total width of the clear opening of the door is added up in inches. The total number of inches will determine the capacity. Below is a chart that governs this:

Without Sprinkler System

Inches Required for Stairways:	0.3 inches per occupant
Inches Required for Other Egress Components (exit doors):	0.2 inches per occupant

With Sprinkler System

Inches Required for Stairways:	0.2 inches per occupant
Inches Required for Other Egress Components (exit doors):	0.15 inches per occupant

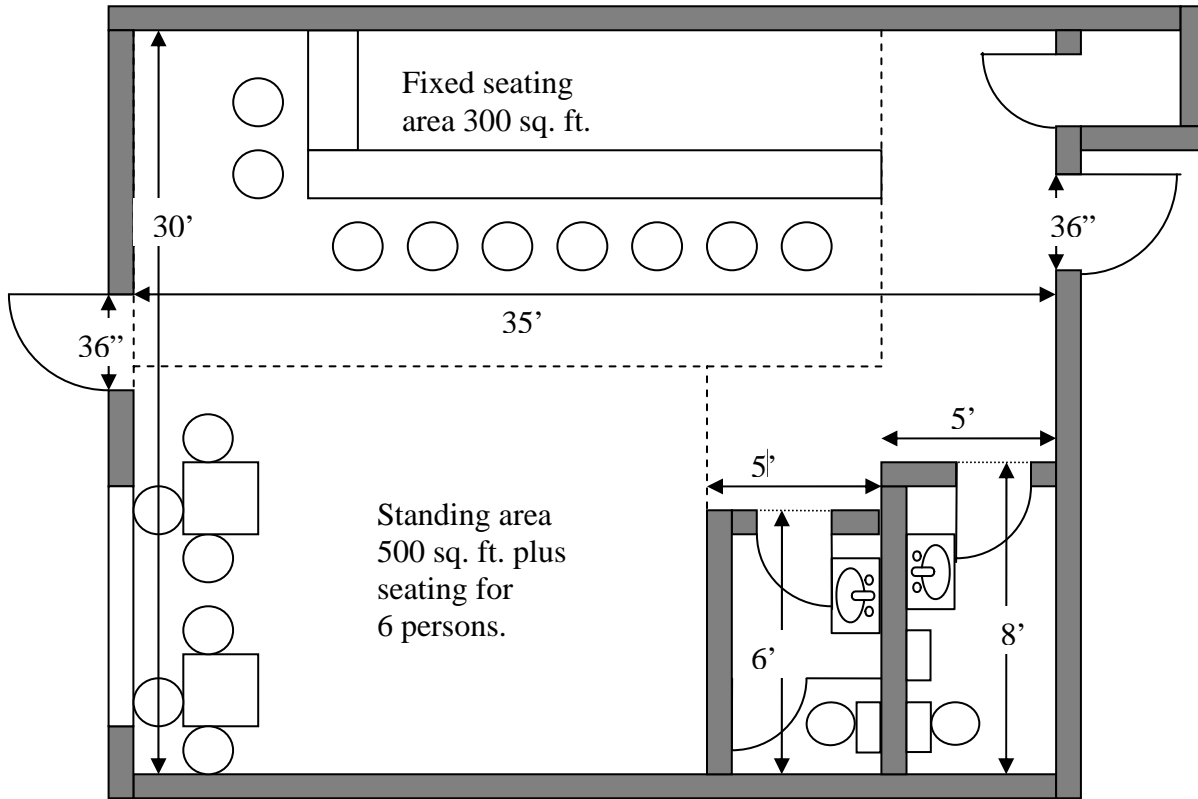
For example, two standard exit doors at 36 inches each in an unsprinklered tavern. The clear opening for the doors is 32 inches each. $32 + 32 = 64$ inches. $64 / 0.2 = 320$ persons.

Floor Area Allowances

The actual floor area used for the tavern occupancy can also be a determining factor for capacity. When determining the floor area of a tavern, the code official will look at the net floor area that is actually occupied by the patrons and staff of the tavern. This area will not include the restrooms, corridors, vestibules, storage rooms, stairwells, and office space or kitchen areas. The net area will include the bar area and also any area where incidental items are stored such as cigarette machines or ATMs. The following table governs floor area allowances:

<u>Occupancy</u>	<u>Maximum floor area allowance per person</u>
Standing space	5 net
Concentrated (chairs only – not fixed)	7 net
Unconcentrated (tables and chairs)	15 net
Commercial Kitchens	200 gross

EXAMPLE FLOOR PLAN



When reviewing this plan, the inspector will need to know the class of construction, if there are other uses in the building, the fire separations provided (if required), the mechanical ventilation requirements and other code items as outlined earlier in this document. If the space is compliant with those code requirements, then the inspector will evaluate the three components of capacity: exiting, restroom and floor area.

Restrooms:

One water closet for females

One water closet for males plus one urinal

Capacity

40

80

Because there is only one water closet for the females, the maximum allowed capacity based on restrooms is 80 persons.

Exits: There are two exit doors, as required, which are at opposite ends of the space so these exits meet the required distribution. The doors swing in the direction of egress – they swing out of the tavern space. There are no stairs. The space does not have a sprinkler system. Therefore, the two doors at 32 inch clear opening each provide for a total of 64 inches. $64/0.2 = 320$. The maximum allowed capacity based on exit widths is 320 persons.

Floor Area Allowance: When computing the capacity based on the floor area, only the net area is calculated.

Standing area	500 sq.ft.
Less 6 seats at 15 sq.ft per person	<u>90 sq.ft.</u>
Balance	410 sq.ft.
	$410/5 = 82$ plus 6 for the seats = <u>88 persons</u>

Concentrated seating: 300 sq.ft. /7 = 42 persons

Capacity for standing area plus seating at tables	88
Capacity for concentrated seating	<u>+42</u>
Total	130 persons

The maximum allowed capacity based on floor area is 130 persons.

The most restrictive component of capacity in this example is the restrooms. Therefore, the inspector will limit the capacity for this tavern to 80 persons maximum.